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ABSTRACT

Forty-two students enrolled in an introductory child development course at the University of Kansas participated in a study which assessed student-instructor interaction in a personalized psychology course. Using Keller's Personalized System of Instruction (PSI), the instructor's role was investigated by comparing the number of interactions between instructors, students, and proctors under two instructor conditions: active and inactive. The active instructor moved throughout the classroom, initiated interactions, and looked over students' study guides. The inactive instructor did not initiate interactions and remained seated at a desk and answered student questions from that location. Results indicated no significant differences in academic performance or rate of learning between the two approaches. However, students rated the active instructor condition more favorably than the inactive instructor role. Seven references are listed. (MER)

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An Analysis of the Instructor's Role in a Personalized Psychology Course

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Abstract

The instructor's role in a personalized psychology course was investigated by comparing the number of interactions between instructors, students, and proctors under two instructor conditions--active and inactive. The "active" instructor moved throughout the classroom, initiated interactions, and looked over students' study guides. The "inactive" instructor did not initiate interactions and remained seated at a desk and answered students questions from that location. Results indicated no significant differences in academic performance or rate of learning between conditions. However, students rated the "active" instructor condition more favorable. These results indicated that students preferred the condition where the instructor was "active."

An Analysis of the Instructor's Role in a Personalized Psychology Course

Since Keller (1968) first described the Personalized System of Instruction (PSI), a great deal of research has been conducted on the components of the system. A recent review of the PSI literature (Kulik, Jaksa, & Kulik, 1978) examined the role of each of these components. One area, however, remains relatively unexplored -- the role of the classroom instructor. Recently, that role has begun to receive attention (Conard & Semb, 1980). These authors reported that while performance on major exams was not significantly affected by varying the activity level of the classroom instructor, students rated the "active" instructor higher than the "inactive" instructor. Furthermore, students reporting perceiving a different level of activity in the "active" and "inactive" classrooms. Of interest, then, is what kind of interactions students perceived as valuable. This paper reports a further analysis of the role of the PSI instructor in terms of student-instructor interactions. Dependent variables included ratings of the instructor, days to complete the course, and student performance on major exams.

Method

Subjects and course personnel. Forty-two students enrolled in eight sections of an introductory child development course at the University of Kansas served as subjects during a 14 week semester. There was one instructor and five proctors per section. Each instructor

taught two sections. Forty-two students were initially and randomly assigned to each section and by this procedure were also assigned to one of the two experimental conditions, "active" or "inactive."

Procedure. The course was divided into three major content parts and each part was further subdivided into four units. A unit consisted of a 30-40 page reading assignment (Lefrancois, 1975) and 20-30 short-answer essay study questions (Semb, 1975). Unit quizzes utilized a mastery component which required an initial score of at least 9 out of 11 points before progressing on to the next unit. If a student scored 8 or less, a retake was required. If a student scored 9 or 10 points, they were allowed to discuss the missed question(s) with their proctor and/or instructor and then rewrite (or correct) their answers. Students also took three review exams and a comprehensive final. At the end of the course, they completed two questionnaires. When students requested their third review exam, they were asked to evaluate the course, the instructor, and the procedures. The questionnaire used a Likert Scale with 1 labelled poor and 5 labelled excellent. When students finished their final exam, they were asked to complete a questionnaire about interactions with the classroom instructor. The course was both student-paced and instructor paced in that students could work as fast as they desired, provided however that they maintained a minimum rate of progress as specified in the course outline.

Experimental conditions. Instructors had one set of "duties" during the "active" condition and a different set of "duties" during the "inactive" hour, and instructors recorded their interactions under each condition. During the "active" hour instructors initiated as many in-

teractions with students and proctors as seemed reasonable. The initiation of an interaction could be based on questions about procedures, study guides, quizzes or exams, or greetings. An interaction was initiated by making eye contact and then speaking, by making an approach, or by actually asking questions or offering a greeting. During the "inactive" hour instructors did not seek to initiate interactions but rather allowed students to initiate interactions. Interactions were recorded as directional in terms of the initiation of the interaction. That is, an interaction could be initiated by a student, a proctor, or an instructor. Only those interactions involving the classroom instructor were recorded.

Experimental Design. A counterbalanced design wherein instructors served as their own controls allowed for inspection of the effects of "active" versus "inactive" instructors. That is, each instructor carried out each of the two conditions. The design was counterbalanced in that while one instructor carried out the "active" condition in the classroom at one hour, the other instructor carried out the "inactive" condition at the same hour in a neighboring room. The following hour, the instructors reversed conditions.

Reliability. An independent observer in each classroom recorded the activity level of the instructor in terms of the initiation of classroom interactions. Observers recorded who initiated each interaction. Observers were not told about the different conditions. Reliability was obtained by comparing observers' and instructors' records of interactions.

Results

Reliability. Reliability was collected for 170 of the 216 sessions. The total agreement between instructors and reliability observers was 3729 out of 4215 for the initiation of interactions for a reliability figure of 88.46%.

III (Instructor Initiated Interactions). Interactions initiated by instructors totalled 1973 (56.5%) during the "active" condition and 633 (33.5%) during the "inactive" condition. Of these, instructor to student interactions were 1255 (63.6%) during the "active" condition and 176 (27.8%) for the "inactive" condition. The rest of the interactions were to proctors, groups of students or other course personnel. Throughout the semester, instructors averaged 8.31 interactions with each student in the "active" condition and 1.22 interactions per student in the "inactive" condition.

SII (Student Initiated Interactions). Interactions initiated by students totalled 1016 (29.1%) in the "active" condition and 649 (34.3%) in the "inactive" condition. Throughout the semester students initiated an average of 6.7 interactions in the "active" condition and 4.5 interactions in the "inactive" condition.

Evaluations. Instructor One received a rating of 4.11 for the "active" condition and a rating of 3.55 for the "inactive" condition. Instructor Two received a rating of 3.89 for the "active" condition and a rating of 4.03 for the "inactive" condition. Instructor Three received a rating of 4.26 for the "active" condition and a rating of 4.33 for the "inactive" condition. Instructor Four received a rating of 4.26 for the "active" condition and a rating of 3.72 for the "inactive" condition.

Across all instructors, the mean rating was 4.13 for the "active" condition and 3.84 for the "inactive" condition. This difference was statistically significant, t (248)=2.43, p <.01.

Exam performance. Students under the "active" condition earned an average of 121.8 out of 144 points (84.6%) for the three review exams while students under the "inactive" condition earned an average of 121.8 out of 144 points (84.6%). This difference was not statistically significant, t (293)=0.12, p >.05. The final exam scores for all students under the two conditions were also analyzed. Under the "active" condition earned an average of 46.8 out of 60 points (78%) and students under the "inactive" condition earned an average of 47.1 out of 60 points (78%). This difference was not statistically significant, t (293)=0.34, p >.05.

Days and range. This represents the actual number of days student came to class to attempt a quiz or exam, and is computed from the first day a student attempted the first quiz until the student completed the course. Students in the "active" condition averaged 15.64 days and students in the "inactive" condition average 15.73 days. This compared rates of progress under the two conditions. Students in the "active" condition averaged 27.03 days and students in the "inactive" condition completed the course with a mean of 27.45 days.

Questionnaire. Students completed a questionnaire covering the following areas: (1) observed frequency of instructors interactions, (2) how often students interacted with instructors, (3) preference for rate of interactions, (4) who typically initiated interactions, and (5) pleasantness of interactions.

Observed frequency of interactions (on a 1-7 Likert scale with 1 labelled very frequently and 7 labelled very infrequently was 2.95 for the "active" condition and 4.10 for the "inactive" condition. When asked how often students interacted with their instructors, interactions averaged once two twice a week for the "active" condition and once a month for the "inactive" condition. Concerning who initiated interactions, students rated the instructor as initiating 55.1% of the interactions in the "active" condition and 15.7% of the interactions in the "inactive" condition. Pleasantness of interactions (on a 1-7 Likert scale with 1 labelled pleasant and 7 labelled unpleasant was rated 1.67 in the "active" condition and 2.34 in the "inactive" condition.

Discussion

In summary, students perceived more interactions occuring in the "active" condition. The objective data support their perception. Students also interacted more often in the "active" condition. Preference for more interactions was essentially neutral. Instructors were perceived as initiating interactions more in the "active" condition. Students also perceived interactions as (slightly) more pleasant in the "active" condition. Finally, students rated instructors in the "active" condition more highly. Some teachers are obviously more effective than others. Even in PSI, where the instructor is supposed to be in an environment where individualization can occur, instructors can neglect their students to the point where they interact once a month. These data can contribute to the literature by alerting PSI users to the importance of utilizing the opportunities available in a PSI classroom for

interacting with students.

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